

Mulberry rust - *Aecidium mori*

Mulberry rust, caused by *Aecidium mori*, is the most destructive disease of mulberry (*Morus* spp.) in nurseries. Mulberry is cultivated for the rearing of silkworms (*Bombyx mori* L.) and is the basis of silk industry. The mulberry leaves are the only source of nutrition for silkworms, whose growth, larval development, and subsequent cocoon production are influenced by its nutritional value. Mulberry rust affects branches, leaves and buds of mulberry resulting in decreases in leaf quality and quantity.

Aecidium mori Barclay, J. Asiat. Soc. Bengal 60: 226. 1891.

Spermogonia unknown.

Aecia amphigenous, solitary or in groups, sometimes densely clustered, on leaves, buds, and branches, also on veins and petioles, often in elongated clusters to 1 cm long, causing distortion and hypertrophy of the host, cupulate, deeply immersed in host mesophyll, 150-200 µm diam., yellowish; peridia prominent, easily splitting vertically, peridial cells oblong to polygonal, 14-31 × 10-21 µm, inner wall 0.5-1 µm thick, verrucose, outer wall 3.5 µm thick, smooth to finely verrucose; aeciospores angularly globose to ellipsoid, densely and minutely verrucose, hyaline to pale yellowish, 11-20 × 9-17 µm, walls 1.5 µm thick.

Uredinia and telia unknown.

Hosts: on species of *Broussonetia* and *Morus* (Moraceae).

Geographic distribution: only known from Asia (Afghanistan, Burma, China, India, Indonesia, Japan, Korea, Pakistan, Philippines, Taiwan and Thailand) (Farr. et al n.d.).

Aecidium mori morphologically is an *Aecidium* based on the presence of a peridium. However, the spores are able to reinfect the mulberry and therefore function as an uredinial stage (Kaneko 1973). Several other rusts are reported on *Morus*, including *Phakopsora mori* Buriticá & J.F. Hennen, *P. nishidana* S. Ito, *P. fici-erectae* S. Ito & Otani, *Cerotelium fici* (E.J. Butler) Arthur and two species of *Uredo*, *Uredo morifolia* Sawada and *Uredo moricola* Henn. All of these differ from *A. mori* in that the sori are not surrounded by a peridium.

References:

- C.M.I. 1989. *Aecidium mori*. Distrib. Maps Pl. Dis. 602: 1-2.
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Kaneko, S. 1973. [Life cycle and behavior of nuclei of *Aecidium mori* Barclay, the causal fungus of mulberry rust]. Trans. Mycol. Soc. Japan 14: 294-301.
Mordue, J.E.M. 1991. *Aecidium mori*. C.M.I. Descr. Pathog. Fungi Bact. 1031: 1-2.

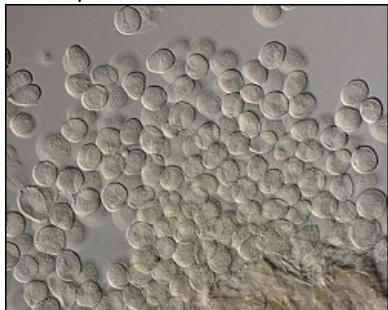
Cluster of aecia on leaf veins. BPI 152603



Close up of aecia. BPI 152601



Aeciospores, median view. BPI 152601



Cluster of aecia on leaf. BPI 152601



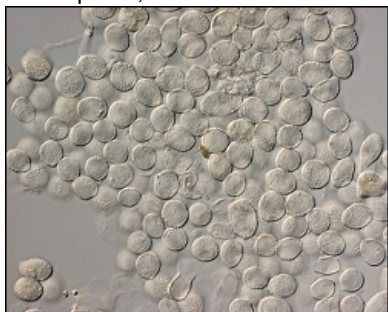
Aeciospores, surface view. BPI 152601



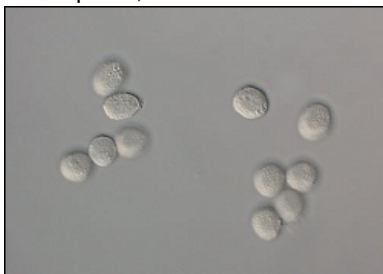
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Aeciospores, median view. BPI 152601



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